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Capacitive coupled RF discharge: Modelling at the local and not local statement of the problem

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Abstract

© Published under licence by IOP Publishing Ltd.The models provided in the research paper describe a capacitive coupled radiofrequency discharge in argon between two parallel plate electrodes, one of which is grounded, and the other is connected to the high-frequency capacitive generator. Herein we review various approaches to simulate a high-frequency capacitive discharge depending on modelled pressure rates. The model of a high-frequency capacitive discharge under low pressure is simulated in non-local approximation, and under high pressure is simulated in local approximation and is sensitive to dimers and molecular ions. We provide calculation data with respect to different pressures and make comparative analysis of data provided by other authors in particular, analysis of data obtained with real experiment.

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